

KIRKBY-IN-ASHFIELD

Urban District Council.

Annual Report

For 1906,

BY

JOHN MACKENZIE,

Medical Officer of Health.

EAST KIRKBY :

PRINTED BY ARTHUR MOORE, CEMETERY ROAD.

Kirkby-in-Ashfield Urban District Council.

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REPORT.



To the Chairman and Members of
Kirkby-in-Ashfield Urban
District Council.



GENTLEMEN,

I have the honour to submit to you my 11th Annual Report on the health and sanitary circumstances of your district.

Year by year more detailed statistics are required by the various Government departments. These statistics, cast in the form of tables, are no doubt of very great value, and involve a good deal of labour. It must be borne in mind that of every table, printed in the appendix

Increased
number of
tables required
by L.G.B.

to this Report and relating to the sanitary circumstances of the district, three copies have to be made, viz., one for the Local Government Board, one for the County Council, and one for the printer. Then again under Section 32 of the Factory and Workshops Act, 1901, I am required to report specifically to you on the administration of the Act in relation to Factories, Workshops, Workplaces, and Home Work; of each table prepared under this head no less than five copies have to be made, viz., one for the Home Office, one for the Local Government Board, one for the County Council, one for you, and one for the use of the M.O.H. My object in mentioning these details is to bring to your notice the difficulty of preventing these reports from expanding, when all the necessary facts have to be included.

As mentioned in previous Reports the Local Government Board require definite information on the following points :—

1. Physical features and general character of the District.
2. House accommodation, specially for the working classes,
3. Sewerage and Drainage.
4. Excrement Disposal.
5. Water Supply.
6. Slaughter-houses, Dairies, and Cowsheds.
7. Nuisance Proceedings.
8. Method of dealing with Infectious Diseases.

It may well appear to you, receiving as you do monthly reports on the sanitary condition of your District, that much of what is said here is repetition, but I must remind you again that it is new to the Central Authority, who demand detailed accounts of everything affecting the health of a District.

The Urban District of Kirkby has an area of 5,590 acres; it is divided into three Wards, and the geological formation is red sandstone and magnesian limestone. To a great extent the whole district may be described as built on the sloping sides of the basin here formed by the Erewash Valley. To the west and south the surface formation is irregular, and the soil forming the lower parts of the slopes and base of the valley is composed of heavy loam, with a substratum of cold clay, containing a large amount of moisture, so that the rise and fall in the groundwater, as seen by some wells, is very considerable.

Area and
physical
features.

The community may be described as a working class population; there are 3,014 inhabited houses and a population of 15,673, calculated up to the middle of 1906. This gives 5·2 persons to the house, and 2·8 to the acre, so that from the point of view of density of population there is ample area and accommodation. On three occasions during the year the Sanitary Inspector and myself made house to house visitations in the poorer parts of the District, and the cases of overcrowding discovered were very few under normal conditions, but I shall have to refer further on in the text to the lack of bedroom accommodation in some houses.

House
accommoda-
tion and
population.

The District was supplied with a new Sewerage Scheme as recently as 1900, and counting all the supplementary schemes for outlying districts the whole parish is completely sewered. There is an excellent sewage outfall in the west end of the District; the crude sewage is first dealt with in settling tanks, which are practically septic tanks, then passed on to primary contact beds worked by patent automatic distributors, then again to secondary and tertiary filter beds, the mode of distribution in these last being by sprays, a form of distribution particularly suit-

Sewerage.

able on account of the primary beds being on a higher level. From year to year additional filter beds are laid down at this outfall, and the excellent way in which these are constructed and managed must be a great satisfaction to the Council, who have spared neither pains nor expense to make the whole system a success. I shall deal with the drainage later on under house drainage.

Excrement disposal.

The sanitary conveniences for the reception of the excrement of the District are (a) water closets, (b) pail closets, (c) midden privies. In houses supplied with water closets the excrement is disposed of by water carriage through our sewerage system. The contents of the pail closets and midden privies are regularly collected by scavenging carts and disposed of to neighbouring farmers. House waste, ashes, and other refuse are collected separately.

Water supply.

Our new Waterworks were completed in 1901, and the District was soon furnished with an excellent supply of water. Unfortunately the original well was found to be incapable of supplying a district of such rapid growth, and this year the Council was compelled to drive new headings in order to bring the supply up to the demand. As was inevitable during these operations sand and grit found its way into the old well, producing great discoloration and no little sediment. Many of the inhabitants are loud in their denunciation of the present supply and ascribe all their ills to its imaginary impurities. In my practice, which covers the whole District supplied with this water, I have not found a single case of illness that could be fairly ascribed to this cause. As you are well aware, my greatest concern is that if this state of things continues for any length of time, the people will be driven to their old wells, for which they have a hereditary

attachment. We must have patience, and when these operations are completed we shall again have water of which the analyst has already said, "that from its softness and purity it is admirably adapted to all domestic purposes." See Report 1899, p. 19. As I am writing a Special Report is being prepared on the chemical and bacteriological quality of our water supply.

There are about a dozen slaughterhouses in the District, all private property. They are, of course, systematically inspected once in every three or four months. In one the accommodation is deficient; in two from lack of paving of yards and footpaths the surroundings are distinctly bad. They all have drains and paved floors, with an abundant supply of water for flushing purposes, and the walls are lime-washed three or four times a year. Although some of the slaughterhouses are always found tidy and clean one cannot resist the feeling that it would be to the sanitary advantage of the Urban District that private slaughterhouses should be ultimately re-placed by public abattoirs.

Slaughter-
houses,
Dairies,
Cowsheds,
etc.

Regulations have been made under Article 13 of the Dairies, Cowsheds, and Milk Shops Order of 1885 and submitted to the Local Government Board. The Board have, on the 29th October, 1906, returned the draft regulations, and whilst drawing attention to their marginal notes and alterations observe "that they see no objection to a series of regulations agreeing strictly with the draft as revised. If the revised draft is accepted, the Council should proceed to formally make the regulations under Seal."

Regulations
with regard
to Cowsheds,
Dairies, and
Milk Shops.

This course has been practically adopted, and we hope very soon to supply each Dairyman, Cowkeeper, and Purveyor of Milk in the District with a copy.

Nuisance
proceedings.

No legal proceedings against nuisances were taken during the year, although a great number of notices with regard to nuisances were issued by the Sanitary Inspector. The work done by this very excellent officer will be further referred to in the body of the Report, and a table summarising the same placed in the Appendix.

Method of
dealing with
infectious
diseases.

With the exception of Smallpox, for which an Isolation Hospital is provided, infectious cases are isolated in their own homes. The amount of isolation possible in working-men's homes is often very limited, but, as mentioned in previous Reports, the results obtained, both as to percentage of attack and case mortality, bear a very favourable comparison with sanitary areas where elaborate and costly Isolation Hospitals are maintained, as the following figures will show :—

For the ten years 1897-1906 1165 Infectious Disease cases were notified, a yearly average of 116·5, and an average rate of attack per 1000 of the population of 9·9. Then again of the 1165 notified 61 died, giving a case mortality of 5·2 per cent.

During the same period 638 cases of Scarlet Fever were notified, with 12 deaths; a case mortality of 1·8 per cent., and the average Zymotic death-rate, not including Diarrhœa, 1·25 per 1000 of the population, and 2·13 per 1000 including Diarrhœa.

TABLE I.

Showing increase in population and house property since census 1901 :—

Years.	East Ward	West Ward	South Ward	Totals	Annual increase	
					Houses	Population
1901—						
Inhabited houses	756	625	674	2055		
Population ...	3872	3173	3273	10318		
1902—						
Inhabited houses	906	686	707	2299	244	
Population ...	4548	3444	3549	11541		1223
1903—						
Inhabited houses	1065	741	726	2532	233	
Population ...	5325	3705	3630	12660		1119
1904—						
Inhabited houses	1193	804	754	2751	219	
Population ...	5965	4020	3770	13755		1095
1905—						
Inhabited houses	1267	852	774	2893	142	
Population ...	6335	4260	3870	14465		710
1906—						
Inhabited houses	1313	901	800	3014	121	
Population ...	6828	4685	4160	15673		665

Increase in population and house property.

A glance at Table I will show that although population and house property are still on the increase the maximum growth was reached in 1902, and since our increase has been at a diminishing ratio. Thus in 1902, 244 new houses were erected and 1,223 added to the population, in 1903 233 new houses and increase of population 1,119; in 1904 219 new houses, increase of population 1,095; in 1905 142 new houses, increase of population 710; and this year, 1906, 121 new houses, with 665 increase of population.

Diminished ratio of increase in house property and population.

Comparing the annual increase of 1902 with 1906 we find that there is a difference in the ratio of increase of 49·5 per cent. in new houses, and 54·3 per cent. in increase of population.

The diminished ratio of increase is almost equally shared in by all the Wards.

Vital statistics
for 1906.

One hundred and seventy-eight deaths at all ages were registered within the Urban District during the year, equivalent to an annual mortality of 11·3 per 1000 of the population, occurring quarterly as follows :—

			Males	Females
Deaths at all ages.	1st Quarter	...	25	23
	2nd „	...	26	21
	3rd „	...	19	26
	4th „	...	15	23
	Totals 1906	...	85	93
	Totals 1905	...	86	76
			101	74
			69	85
			90	86

TABLE II.

Showing Deaths in Wards :—

		East Ward	West Ward	South Ward	Deaths occurring quarterly in Wards.
1st Quarter	...	17	12	19	
2nd Quarter	...	16	14	17	
3rd Quarter	...	13	22	10	
4th Quarter	...	17	15	6	
Totals 1906	...	63	63	52	
Totals 1905	...	64	50	48	
Totals 1904	...	69	47	59	
Totals 1903	...	57	52	45	
Totals 1902	...	65	61	50	
Totals 1901	...	61	55	50	
Totals 1900	...	88	66	36	
Totals 1899	...	58	56	45	
Totals 1898	...	56	35	49	
Totals 1897	...	58	24	47	

Death-rate for the last eleven years :—

1896	...	18·5 per 1000 of the population	
1897	...	14·7	„ „
1898	...	15·0	„ „
1899	...	16·4	„ „
1900	...	18·9	„ „
1901	...	15·9	„ „
1902	...	15·2	„ „
1903	...	12·1	„ „
1904	...	12·6	„ „
1905	...	11·1	„ „
1906	...	11·9	„ „

Corrected
death-rate
according to
census 1901.

Vital
statistics.

The estimated population at Midsummer, 1906, was 15,673, this figure is arrived at by calculating 5·2 per inhabited house, and from personal knowledge of the families in the District I do not consider this an over estimate. The total deaths at all ages occurring within the Urban District during 1906 were 178, equivalent to an annual mortality of 11·3 per thousand. The corresponding rate last year was 10·6, the slight increase being due to a corresponding increase in Infant mortality, which is this year 11·2 per thousand births higher than last year. It is well known that 1906 was an unhealthy year, the climatic changes in winter being extreme and sudden, and the heat in summer during the months of August and September being almost tropical. It has long been my opinion that the sources which supply our constitutional resistance are more effective in helping us to stand against the cold and wet of a stormy summer than against excessive heat, a fact which is specially brought out by the study of Infant mortality, and shows that we bear in our constitutions the stamp of our northern ancestry.

Deaths in
Public
Institutions.

Reverting to the total deaths at all ages registered in the District, it should be noted that 10 other deaths were registered in Public Institutions outside the District, and charged to this Parish, making the nett total at all ages 188, and the nett death rate ~~12·9~~ 11·9 per thousand, against 11·1 in 1905, 12·6 in 1904, 12·1 in 1903 (see Tables).

We pass on to Ward statistics, for it is of the utmost value to ascertain how the incidence of disease affects certain areas of known populations, and the statistics often reveal the unfavourable influence of climate, soil, social habits, and most of all insanitary conditions as predisposing causes.

From Table II it will be seen that 63 deaths at all ages were registered in 1906, 64 in 1905, 69 in 1904, giving a death-rate for each of the years of 9·2, 10·1, and 11·5. East Ward.

In this Ward the deaths registered numbered 63 in 1906, 50 in 1905, and 47 in 1904, giving a death-rate of 13·4, 11·6, and 11·7 West Ward.

Here the deaths registered numbered 52 in 1906, 48 in 1905, and 59 in 1904, showing a death-rate of 12·5, 12·1, and 15·6. South Ward.

It will thus be seen that for the year under review the West Ward has the highest death-rate, being 4·2 per thousand above the East Ward, the South Ward comes next with 3·3 per thousand above the East Ward, but the difference between these two Wards is only ·9. For the ten years ending 1906, the average death-rate for the East Ward has been 14·1, for the West Ward 14·6, and for the South Ward 13·1. It is highly interesting to observe that during the first quinquennium the average death-rates were :—East Ward 17·4, West Ward 15·9, South Ward 13·5 ; and at the second quinquennium the rates were :—East Ward 10·9, West Ward 13·4, South Ward 13·3. So that between Midsummer 1901 and Midsummer 1906 the death-rate has fallen in the East Ward 6·5, in the West Ward 2·5, in the South Ward ·2 per thousand, and we are in a position to see that the average for deaths at all ages in the South Ward remains practically the same, while in the other two Wards it has decreased. Another aspect of these statistics worthy of being placed before you is this, that taking the rate of 1896 as the basis of our calculation, we may confidently affirm that sanitation has saved 532 lives in ten years ; in other words this is equivalent to being three years and

four months without a death in the District calculated on this year's total deaths.

To put it in another way, from January 1st, 1897, to December 31st, 1906, 1621 persons died at all ages, had however the death-rate of 1896 remained undiminished, 2153 would have died, so that the saving in lives has been 32·8 per cent. Practically one death out of every three is now prevented by improved sanitation.

These facts must be very gratifying to the Council. But our Sanitary outlook would be indeed contracted were we only to take account of the lives saved and omitted to reckon the innumerable other benefits conferred on the community at large. The lesson to be drawn from these figures is that emphasised in last year's Report—decreased death-rate follows Sanitary Improvements as trade follows “The Flag.”

Birth-rate. Five hundred and thirteen births were registered, equivalent to an annual birth-rate of 32·7 per 1000 of the population, occurring quarterly as follows :—

	Males	Females	Illegitimates	
			Males	Females
1st Quarter ...	61	62	1	1
2nd Quarter ...	70	64	5	3
3rd Quarter...	59	58	2	1
4th Quarter...	60	63	2	1
<hr/>				
Totals 1906 ...	250	247	8	8
Totals 1905 ...	259	236		
Totals 1904 ...	281	240		
Totals 1903 ...	244	251		
Totals 1902 ...	239	227		
Totals 1901 ...	214	215		
Totals 1900 ...	202	199		
Totals 1899 ...	219	193		
Totals 1898 ...	199	155		
Totals 1897 ...	190	208		

TABLE III.

Showing births in each Ward :—

		East Ward	West Ward	South Ward	Births occurring quarterly in Wards.
1st Quarter	...	61	34	30	
2nd Quarter	...	58	50	34	
3rd Quarter	...	54	38	28	
4th Quarter	...	64	36	26	
Totals 1906	...	237	158	118	
Totals 1905	...	211	161	123	
Totals 1904	...	238	122	161	
Totals 1903	...	212	146	137	
Totals 1902	...	204	129	133	
Totals 1901	...	169	125	135	
Totals 1900	...	181	107	113	
Totals 1899	...	180	108	124	
Totals 1898	...	156	91	106	
Totals 1897	...	178	79	141	

Birth-rate for the last eleven years :—

1896	...	39·5 per 1000 of the population		
1897	...	44·7	”	”
1898	...	38·1	”	”
1899	...	42·6	”	”
1900	...	39·9	”	”
1901	...	41·2	”	”
1902	...	40·4	”	”
1903	...	39·1	”	”
1904	...	37·8	”	”
1905	...	34·2	”	”
1906	...	32·7	”	”

Comparative
Birth-rate
corrected
according to
census 1901.

Seventy-one deaths were registered under 1 year of age equivalent to an annual mortality of 138·4 per 1000 births, 377·6 per 1000 total deaths, and 4·5 per 1000 of the population, occurring quarterly as follows :—

Infantile
mortality.

	Males	Females	Illegitimates	
			Males	Females
1st Quarter ...	10	4	0	1
2nd Quarter	7	3	1	2
3rd Quarter...	6	16	2	0
4th Quarter...	8	10	0	1
	<hr/>	<hr/>	<hr/>	<hr/>
Totals 1906...	31	33	3	4
	<hr/>	<hr/>	<hr/>	<hr/>
Totals 1905...	35	28		
	<hr/>	<hr/>		
Totals 1904...	54	32		
	<hr/>	<hr/>		

TABLE IV.

Showings Deaths under one year occurring quarterly in
Wards :—

		East Ward	West Ward	South Ward	Ward Infantile Mortality.
1st Quarter	...	6	4	5	
2nd Quarter	..	4	5	4	
3rd Quarter	...	6	13	5	
4th Quarter	...	10	6	3	
Totals 1906	...	26	28	17	
Totals 1905	...	24	21	18	
Totals 1904	...	39	22	25	
Totals 1903	...	24	12	19	
Totals 1902	...	28	28	25	
Totals 1901	...	25	25	22	
Totals 1900	...	44	23	15	
Totals 1899	...	23	21	14	
Totals 1898	...	29	8	17	
Totals 1897	..	21	7	28	
Totals 1896	...	35	12	16	

Infant Death-rate for the last eleven years :—

Infant death- rate for last eleven years.	1896	...	185·9 per 1000 births
	1897	...	140·7 ,,
	1898	...	152·5 ,,
	1899	...	140·7 ,,
	1900	...	204·4 ,,
	1901	...	167·8 ,,
	1902	...	173·8 ,,
	1903	...	111·1 ,,
	1904	...	165·0 ,,
	1905	...	127·2 ,,
	1906	...	138·4 ,,

155·2 average years 1896-1906.

TABLE V.

Showing Notifiable Zymotic Diseases occurring in each month :—

	Scarlet fever	Diphtheria	Typhoid fever	Puerperal fever	Erysipelas	Small-pox	Membranous Croup	Chicken-pox	Typhus fever
January ...	16	1	5		2				
February ...	12	1	1		1				
March ...	14	1	3		1				
April ...	18	2			2				
May ...	5		5		2				
June ...	5	3	2		3				
July ...	6	2	1						
August ...	3		2		4				
September ...	4		4	1					
October ...	9	2	1		1				
November ...	11		2	1	4				
December ...	17	1	1		3				
Totals 1906 ...	120	13	27	2	23				
Totals 1905 ...	92	8	38	2	20				
Totals 1904 ...	79	6	18	3	12	3	1	38	
Totals 1903 ...	41	4	26	1	17	5			
Totals 1902 ..	17		16	3	4				
Totals 1901 ...	11	2	19	2	8	1			
Totals 1900 ...	23	9	18		15				
Totals 1899 ..	163	19	22	5	13		1		
Totals 1898 ...	65	5	23		14		1		
Totals 1897 ...	27	2	37		11		6		1
Totals 1896 ..	12	7	12	2	3				

Zymotic diseases occurring in each month.

TABLE VI.

Showing Notifiable Zymotic Diseases occurring in each Ward :—

Notifiable
Zymotic
diseases in
each Ward.

	East Ward	West Ward	South Ward
Diphtheria ...	7	5	1
Erysipelas ...	7	8	8
Scarlet Fever ...	38	64	18
Typhoid Fever ...	7	13	7
Puerperal Fever ...	1	...	1
Totals 1906...	60	90	35
Totals 1905 ..	44	72	45
Totals 1904...	42	30	88
Totals 1903...	43	26	25
Totals 1902...	15	15	12
Totals 1901...	16	25	2
Totals 1900...	19	24	22
Totals 1899...	88	101	34
Totals 1898...	58	23	27
Totals 1897...	39	21	24

TABLE VII.

Showing Deaths from Zymotic Diseases occurring in each month :—

	Scarlet fever	Diphtheria	Typhoid fever	Typhus fever	Zymotic Enteritis	Puerperal fever	Whooping-cough	Erysipelas	Measles	Influenza
January ...										
February ...							2			
March ...							1			
April ...										1
May ...							1			
June ...		1	1				2			
July ...										
August ...					6					
September ...					3					
October ...					1					1
November ...										
December ...										
Totals 1906		1	1		10		6			2
Totals 1905					8		7		16	3
Totals 1904		3	3		13	2	3		1	
Totals 1903	1	1	6		4			2		
Totals 1902			2		1	2	6		13	
Totals 1901		1	1		10	2	3	2	6	
Totals 1900	2	1			10	1	3			
Totals 1899	5	3	4		12	2	1		6	
Totals 1898	3		3		15		4	1	4	
Totals 1897	1	1	4	1	6		5			
Totals 1896		2	4		7		2		5	

Deaths from Zymotic diseases occurring in each month.

TABLE VIII.

Showing deaths from Zymotic Diseases occurring in each Ward :—

		East Ward	West Ward	South Ward
Deaths from Zymotic diseases in Wards.	Influenza ...	1	1	...
	Diphtheria ...	...	1	...
	Zymotic Enteritis	4	6	...
	Whooping Cough	3	2	1
	Typhoid Fever ...	1	...	...
	Measles ...	...	...	...
	Totals 1906...	9	10	1
	Totals 1905...	13	12	9
	Totals 1904...	13	4	8
	Totals 1903...	11	...	3
	Totals 1902...	9	13	2
	Totals 1901...	10	9	5
	Totals 1900...	9	3	5
	Totals 1899...	10	15	8
	Totals 1898...	13	4	13
	Totals 1897...	7	4	7

Zymotic Death-rate for the last eleven years :—

1896	...	4·1 per 1000 of the population			Zymotic death-rate for last 11 years.
1897	...	1·3	„	„	
1898	...	1·6	„	„	
1899	...	2·1	„	„	
1900	...	0·6	„	„	
1901	...	1·3	„	„	
1902	...	1·9	„	„	
1903	...	0·7	„	„	
1904	...	0·8	„	„	
1905	...	1·7	„	„	
1906	...	0·6	„	„	

Average, years 1896-1906, 1·6.

Not including Diarrhœa and Dysentery.

Birth-rate.

Five hundred and thirteen births were registered during the year, an annual birth-rate of 32·7 per 1000 of the population, the lowest birth-rate recorded since we became an Urban Authority. As regards sex, the numbers are about equal, 258 males and 255 females. There were 16 illegitimates, 8 males and 8 females. Table III shows the quarterly Births for each Ward, East 237, West 158, South 118; these figures show a Ward birth-rate as follows:—East 34·7, West 33·7, South 28·3.

Taking the last ten years—1897-1906—the average birth-rate has been 39·0, in the first quinquennium 41·3, in the second 36·8; this shows a fall in the birth-rate corresponding *pari passu* with a fall in the death-rate. In order to bring out the facts more clearly in each locality it is necessary to compare the average birth-rate in Wards for the same period. For the 10 years—1897-1906—the East Ward has an average birth-rate of 43·0, West Ward 35·4, South Ward 35·7; for the first half—1897-1901—the rate is East Ward 47·4, West Ward 35·4, South Ward 36·8; and in the second half East Ward 38·6, West Ward 35·9, South Ward 35·0. The death-rate and birth-rate incidence in Wards establishes the very interesting fact that while in the West and South Wards the former shows no great decline, neither does the latter, but in the East Ward the exact reverse holds good, yet this is where we find the greatest increase and density of population. The explanation offered is that hitherto the chief sanitary improvements have been effected in this Ward. Again in the East Ward there are no houses with only two small bedrooms to the house.

A jeremiad more doleful than that of any of the prophets of the Captivity has been raised by a certain class of writers on Public Health subjects over the decline

in the birth-rate. It is confidently averred that the lower strata in the social organism alone produce, and we shall very shortly arrive at a stage when the nation will consist of the offspring of the poorest and most ignorant. The refined, the intelligent and the wealthy are being gradually sterilized. It seems to be forgotten that in a country like ours with equal laws and opportunities and great educational progress a process of social convection is ever at work. Individuals born with superior constitutions and latent brain powers will ultimately, by sheer force of capacity, rise to the top. In the struggle for existence the laws for the conservation of virtues are at work as well as those for the conservation of energy. The children of the poor tempered by early struggles and inured to hardships, when stimulated by the love of learning, habits of prudence and frugality, have at all times proved most worthy citizens. The enervation following the excessive enjoyment of wealth and luxury may produce sterility, but the desire for material and moral improvement coupled with self-reliance and independence will evolve from amongst the poor in the future as in the past a virile and sturdy race. These pessimists must have forgotten the Spencerian maxim, that if the environment is inimical to the offspring, the power of production in the parent will correspondingly increase, so as to ensure a given number arriving at maturity. The moral of the whole subject is, improve the homes and lives of the people; if fewer children are born, more will survive.

The question of the Birth-rate naturally leads up to the discussion of Infant Mortality. The national conscience is at last fully aroused to the waste of infant life, and no subject receives more sympathetic attention than how to prevent this waste. The Urban District Council,

fully alive to the urgency of this question, delegated their Chairman and Medical Officer of Health to attend the National Conference on Infantile Mortality held at the Caxton Hall, Westminster, on June 14th, 1906, under the presidency of the Rt. Hon. John Burns, M.P. After promising officially to render what practical aid his department could afford, the Rt. Hon. gentleman truly remarked that he expected more from the educational enlightenment following the discussion of this subject than he did from immediate municipal aid or legislative help. He went on to observe that the seriousness of the subject increases every day. "The grisly fact of infants dying before their time is an appeal to action that no one can resist; but the condition of their dying evokes more pity and sympathy than the death itself." One more sentence from this admirable address: "Infantile Mortality, apart from epidemic causes, too often corresponds with the drunkenness that accompanies full employment and high wages disproportionately and stupidly spent." We cannot ignore the fact that often when trade fails and work is slack and even when wages are low and intermittent the death-rate among the children drops down. The papers discussed were of great practical value, e.g., (a) "Premature birth in relation to Infantile Mortality," (b) "The public supply of pure or specially prepared milk for the feeding of infants," (c) "Alcoholism in relation to Infant Mortality," (d) "The teaching in school of Elementary Hygiene in reference to the rearing of Infants," (e) "The appointment of qualified women with special reference to the Hygiene and Feeding of Infants." Most of these subjects have been brought to your notice in one or other of my previous Reports as far as space at my disposal permitted. The wisdom of teaching hygiene and

the management of infants to the mothers of the future is specially recommended on page 17, Report 1901. Again page 20, 1905, it is pointed out that there is surely nothing extreme in suggesting to you the great utility for the lessening of Infant Mortality of (1) Municipal Milk Depôts, now so common in our large towns. This would be an incalculable boon in summer and autumn. (2) A children's hospital-trained nurse, whose duty would consist of visiting and superintending the rearing of infants in health and disease. Such a nurse would of course give her time exclusively to improving the home life of young infants, the food, clothing, and above all education in the duties of motherhood of the scores of women here, mothers of lusty and healthy born children, of whom, alas ! one can predict with confidence that by the end of the year not a few will have succumbed to improper feeding or exposure, etc., etc. On no paper discussed at the Conference was there such a consensus of opinion as on the great value of suitable lady health visitors. Having said so much about the National Conference on Infantile Mortality the limits of space at my disposal in a Report like this will only permit of my stating briefly in tabular form the vital statistics of Infant Mortality in this District for the last ten years.

Seventy-one deaths were registered under 1 year of age, equivalent to an annual mortality of 138·4 per 1000 births. Seven of these were illegitimates. The death-rate amongst this class is always very high, and this year higher than usual, namely 435·7 per 1000 births. Deducting the seven illegitimates we find a legitimate death-rate of 128·7. In 1905 the Infant death-rate was 127·2, and in 1904 165·0 per 1000 births. So that we are this year 11·2 per 1000 above last year, but 26·6 below 1904.

Vital statistics
of Infant
Mortality
1897-1906.

For the last 10 years the average for the whole District has been 151·9 per 1000 births, showing this year to be 13·5 less than the mean for the decade. Again taking first five years—1897-1901—mean Infantile Mortality 161·2; second five years—1902-1906—mean 143·1. So that the averages for these periods show the annual Infant Mortality of 1906 to be less than the first quinquennium by 22·8, and 4·7 less than the second quinquennium. Taking 1896 Infant Death-rate as our standard of comparison we find a reduction on the average of 10 years of 34·0 per 1000 births. At this rate, with 1906 as our standard of comparison, 1916 should have an Infantile Death-rate of 104·4.

England and
Wales Infant
Mortality for
1906.

England and Wales for 1906 133 per 1000 births, 76 great towns 146 and 142, smaller towns 138 per 1000 births.

Taking now the Wards for 1906 :—

East Ward	...	109·7 per 1000 births
West Ward	...	177·2 „
South Ward	...	144·0 „

Average Infantile Mortality in Wards for the last 10 years—1897-1906 :—

East Ward	...	145·8 per 1000 births
West Ward	...	158·8 „
South Ward	...	153·9 „

For the first quinquennium :—

East Ward	...	164·2 per 1000 births
West Ward	...	157·1 „
South Ward	...	153·4 „

Second quinquennium :—

East Ward	...	145·5 per 1000 births
West Ward	...	160·6 „
South Ward	...	154·4 „

Finally comparing this year's Infantile Death-rate with the averages for the last five years in the decade it will be observed that there is a most gratifying decrease in the East Ward, namely 35·8 per 1000 births, South Ward 10·4, but the West Ward has an increase of 16·6.

It is worthy of recording that of the 71 infants dying under one year of age 46 were hand fed, 64·8 per cent., the diet ranging from sugar and butter to bread crusts, quaker oats, and bacon to suck; 11 or 15·5 per cent. mixed feeding, i.e., breast with other mixtures such as cows milk, rusks, rice, and Scots Emulsion; 14 or 19·7 per cent. were exclusively fed on the breast. As to age 38 per cent. died under one month, and 61·9 above one month and under 12 months.

Thirteen cases were notified during the year, 7 in the East Ward, 5 in the West Ward, and 1 in the South Ward. There was one death, giving a case mortality of 7·6 per cent., against 8 in 1905 with no deaths. Three of the cases were post-scarletinal, four were scholars in one of the public elementary schools, and, as not infrequently happens, they were notified during the Easter holidays. One was the case of a schoolgirl, aged 10, who went from home for her holidays and returned with Diphtheria. In three other cases the sanitary surroundings and house drainage were defective, but no sanitary defect could be discovered to account for one in a recently built house in Crocus Street. The fatal case was that of a farmer, aged 43, working on the highway under the Council, the probability is that the infection was conveyed to him by road dust. Motor-car traffic has brought into existence a new element of danger—clouds of the finest dust enveloping lanes and highways, which are highly injurious to vegetable and animal life.

Erysipelas.

Twenty-three cases of this disease were notified, 7 in the East Ward, 8 in the West Ward, and 8 in the South Ward. The cases occurred mostly in old and feeble people, and were none of them serious.

Scarlet Fever.

One hundred and twenty cases were notified, 38 in the East Ward, 64 in the West Ward, and 18 in the South Ward. As may be seen from Table V. Scarlet Fever has been prevalent throughout the District during the whole year, the highest number notified for any one month being 18 in April, and the lowest 3 in August. From the same Table it will be observed that the Urban District has never been free from this infection, though the yearly variations are considerable; 163 notifications in 1899, but only 11 in 1901. From Table VII it may be seen that only one death has been registered from Scarlet Fever since 1900, and further that in 10 years the total number of deaths from this disease is 12 out of 638 cases, a case mortality of 1·2 per cent; or taking the whole 11 years since we became an Urban Authority, there have been 12 deaths out of 650 cases, a case mortality of 1·08 per cent. In the City of Nottingham in 1905, the case mortality was Bagthorpe Hospital 2·0, home treatment 3·3 per cent.

As already pointed out these results go far to justify the home treatment of Scarlet Fever. Given reasonable care and such isolation as can be carried out in the best class of workingmen's houses it is clearly proved by those figures that home treatment is superior to other forms of segregation. The great difficulty met with in dealing with Scarletina, as with Measles and Whooping-cough, arises from (a) the floating nature of the population, (b) their habit of crowding to wakes, feasts, and fairs. In Kirkby we have wakes twice a year, to which every county between the Wash and the Humber contribute

their share of the fetchers and carriers of every form of infection. These noisy and oil-smelling carnivals are patronized by the young and susceptible part of the community and I have never known Kirkby wakes pass without leaving their infectious trail behind them.

In isolation there is difficulty in convincing the parents that mild cases of Scarletina require to be as rigidly isolated as severe cases, in order to prevent the complaint spreading to other members of the family. They can't see the necessity of it when the child is to all intents and purposes well, though some few would go to the other extreme and endanger a delicate child's health by too long confinement in one small room. Children from infected families are debarred from Day and Sunday Schools for eight weeks, and before mixing with others, either at home or outside, are subjected to five or six successive disinfective baths.

The District has been practically free from Measles all the year, and for the first time the Sanitary Authority has not been called upon to order the closing of the elementary schools, always an anxious and distasteful step.

Twenty-seven cases were notified, 7 in the East Ward, 13 in the West Ward, and 7 in the South Ward, with one death; against 39 last year, East Ward 15, West Ward 5, South Ward 19. The case mortality this year is 3·7. As in last year's Report I have classified the Typhoid cases according to the sanitary convenience of the houses:

	(a)	(b)	(c)		
Houses with	w.c.'s	pails	privies	imported	Totals
East Ward ...	1	0	6	—	7
West Ward ...	0	4	6	3	13
South Ward ...	0	4	3	—	7

East Ward.

It will thus be seen that 55·5 per cent. occurred in houses with privies, 29·6 in houses with pail closets, and only 3·7 in houses with water closets. As previously observed many of the houses with w.c.'s are not properly trapped; see p. 29, Report 1905, where this subject is specially brought under your notice. The only case occurring this year in a house with w.c. was in Milton Street, East Ward, where the w.c. was found to be defective, the pan being smashed at the bend and the flush freely percolating into the floor. The other six cases occurring in this Ward were in houses with privies only, all in Edward Street and Alexandra Street. This property, which has only been built a few years, is the most substantial and commodious form of workmen's cottages in this district, with excellent pavements and electrically lighted houses and streets, and provided with main sewers, but the great drawback to efficient sanitation is that they are provided only with the old-fashioned vaulted midden-privies, at the rear of each of which there is an undrained pigstye. The property is owned by the Butterley Company, Ltd., whose Surveyor is to be blamed for this state of affairs, but the Council and their Surveyor are by no means free for they should never have passed plans of this description, when it was the declared policy of this Council on the advice of their Sanitary Officers to do away with privies and introduce pail and water-closets at every possible opportunity. Had a representation to this effect been made to the Company at the time there is little doubt that this better provision would have been made. Unless these midden privies are done away with I anticipate that soil infection will play an important part in the causation of Typhoid Fever in this locality. It cannot be otherwise than injurious to the Butterley Company's interests that any of their workmen should be incapacitated from work by

such a lingering and debilitating illness as Typhoid Fever. I note also that the only death from Typhoid Fever occurred in this locality, viz., in Edward Street.

In the West Ward no less than three cases were imported, two were servants sent home from their situations in Nottingham, the third was a woman on a visit, who was practically suffering from the disease when she came. One case only was suspected to be due to drinking impure well-water. With regard to the nine cases due to midden privies in this and the South Ward I should like to observe that the class of houses are of an old type, often deficient in accommodation, with curtilage, such as yards, courts, pieces of uncultivated land, taken up with every form of rubbish, pigstyes, and fowl pens. Surroundings of this kind, as is well known, propagate Typhoid Fever through soil infection. The percentage of cases, 29·7, occurring in houses with pail closets, is remarkably near to that of last year, 30·7, so that we cannot by any means be satisfied with this means of conservancy. The only real advantages that pails have over privies are (1) the pail is not so conducive to soil infection, (2) it is emptied weekly ; but pails will continue to be a source of danger until we disinfect them every time they are emptied. In this connection our system of removing typhoid excreta from the sickroom by typhoid pails is helpful to us, but let it be borne in mind that undetected cases of Typhoid Fever occur and that ill-defined cases are delayed in notification, so do what we may, typhoid germs will breed in our pails and privies until we adopt the water-carriage system throughout. I am convinced that our typhoid cases would be more numerous but for the diligence exercised in scavenging.

Puerperal
Fever.

Two cases were notified, one each in the East and South Wards, with no deaths.

Epidemic
Influenza.

Two deaths were registered, one each in the East and West Wards. Early and late in 1906 Influenza in epidemic form passed over the District, and no doubt indirectly increased the death-rate, though only two cases are specifically ascribed to it,

Phthisis.

Nine deaths were registered, 2 in the East Ward, 3 in the West Ward, and 4 in the South Ward, against 8 in 1905, 5 in the East Ward, 1 in the West Ward, and 2 in the South Ward.

Other
Tubercular
Diseases.

Twelve deaths were registered as due to other tubercular diseases, 4 in the East Ward, 3 in the West Ward, and 5 in the South Ward. Making every allowance for the influence of air, soil, climate, and insanitary surroundings on the spread of consumption, we must again draw attention to the fact that this complaint is infectious, and in a very virulent form to susceptible people living in contact with advanced cases. It is gratifying to find the progress of ideas in this direction; it is by no means uncommon now to come across a consumptive with his pocket spittoon, living in rooms with windows open night and day—a thing inconceivable a few years ago. Further the spittoon is carefully disinfected and the contents burnt.

Royal
Commission on
Tuberculosis.

The Royal Commission on Tuberculosis:—"There can be no doubt that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis, and there also can be no doubt that in the majority at least of these cases the bacillus is introduced through cows

milk. Cow's milk containing bovine tubercle baccilli is clearly a cause of tuberculosis and of fatal tuberculosis in man." This is the reply of British science to Professor Koch's famous declaration in 1901, that human and bovine bacilli were of a different kind.

NON-ZYMOTIC DISEASES.

Cancer or
Malignant
Disease.

Ten deaths were registered from this cause, 4 in the East Ward, 5 in the West Ward, and 1 in the South Ward, against 6 last year, 2 in the East Ward, 3 in the West Ward, and 1 in the South Ward. This is the highest number ever registered, and the following figures will show that Malignant Disease is on the increase in this District :—

Years ...	1896	1897	1898	1899	1900	1901
Deaths...	2	4	0	3	4	3
Years ...	1902	1903	1904	1905	1906	
Deaths...	0	5	6	6	10	

Deaths from
diseases of the
respiratory
organs.

Thirty-two deaths were registered, 8 under one year of age, 7 aged 1 to 5, 2 aged 5 to 15, 7 aged 25 to 65, 8 aged 65 and upwards, occurring in Wards as follows :— East Ward 13, West Ward 12, South Ward 7. It is worth observing that deaths from these diseases occur in almost equal numbers at both extremes of life, viz., 8 under one year, and 8 over 65, also 7 aged 1 to 5, and 7 aged 25 to 65, whereas the period embraced by the ages 5 to 25 only accounts for 2. The practical lesson is that the very young and the very old should be guarded against exposure to our treacherous climate.

Heart
disease.

Seventeen deaths were registered, 4 in the East Ward, 3 in the West Ward, and 10 in the South Ward. As to age, 2 were between 15 and 25 years, 9 between 25 and 65, and 6 above 65. Nearly half of these cases were certified not as being due to organic disease, but as failure of the heart's action accompanied by other acute disease conditions.

Five deaths were registered from accidents. Inquests Accidents.
 were held in all cases, with the following verdicts :—Two
 accidentally killed whilst at work, one accidentally burnt,
 one due to fatty heart, one due to accidentally falling on
 pavement. Considering that our population is an
 industrial one, and almost entirely employed in the
 dangerous occupation of coalmining the number of fatal
 accidents is very small.

Fifty-five deaths were registered under this head, 16
 were under one year of age, 4 aged 1 to 5 years, 1 aged All other
causes.
 5 to 15 years, 1 aged 15 to 25 years, 16 aged 25 to 65
 years, and 17 above 65 years; 20 in the East Ward, 19
 in the West Ward, and 16 in the South Ward.

GENERAL REMARKS.

Having so far dealt almost entirely with Vital Statistics, Diseases, and their local distribution, there remains a variety of points to be considered concerning our sanitary history. It is necessary that progress made during the year should be faithfully recorded, but it is of equal importance to remind you of what has been omitted, and failures to carry out recommendations of previous reports.

Unventilated
Water Closets.

On page 29 of last year's Report attention is drawn to the fact that the bye-law requiring separate ventilators and inspection chambers for water closets is not carried out. The same applies this year. On page 36, 1904, the number of water closets not so constructed is given, and it is pointed out that for their sanitary efficiency a disconnecting and inspection chamber should be placed between the main sewer and the closet, and again a suitable ventilator between this chamber and the closet. More ventilators for public sewers at given points are also recommended.

Drain
testing.

This is a subject that I have brought before your notice regularly for many years, and I am pleased at last to be able to report that since March, 1906, systematic drain testing has been successfully carried out. Now as soon as new houses are erected their drains are carefully tested before being connected to the main sewer ; 92 such houses have been tested this year, giving a length of drain pipes of 1034 yards. Of course the builder knew when laying his pipes that they would be tested before being covered in, but notwithstanding 125 defects were revealed in testing, i.e., 12 per cent., and these defects were all remedied before the trench was filled in. It would be interesting to know what percentage of defects

would have been found in years gone by when the builder knew there was to be no test ; and it can be no exaggeration to say that there must be miles of house connections with leaky joints in this parish.

Lindley's Lane, so often reported as a nuisance, has been improved this year. On page 30 of last year's Report it is pointed out that the house connections in King Street and Queen Street, Lindley's Lane, are joined to the main sewers through their back gardens. The main sewer in King Street has been deepened and much improved this year, which secures a better fall, but otherwise things remain in statu quo. A main sewer for Queen Street is still needed and could be easily constructed ; until this is done, this District will suffer from deficient sanitation.

Lindley's
Lane.

Another source of great trouble, especially last summer, though somewhat improved since, has been the pond in Pond Street. Here we have a large body of stagnant water surrounded on all sides by houses. Into this filthy pool all forms of rubbish and waste, including dead animals, have been freely thrown. While the hot summer lasted, and the water in the pond was low, the result may easily be imagined, the poisonous smell pervading the whole district. A good deal has been done this year to fill in this enormous clay-hole, but the heavy winter rains have filled in the considerable hollow still remaining, and if nothing further is done, when the summer returns, the nuisance will return too.

Pond Street
Nuisance.

A step in the right direction has been the framing of regulations in respect of Cowsheds, Dairies, and Purveyors of Milk already referred to. During the year all the farms in the District were visited by your Medical Officer

Milk supply.

of Health and Sanitary Inspector ; we have to report that many of the cowsheds were defective in cubic space, ventilation, and impervious flooring, but the animals themselves were in good condition and the majority of them kept very clean.

Methods of
cleansing milk
vessels.

The farmers all cleanse their vessels by scalding and scrubbing them in boiling water ; in no single instance did they subject their milk vessels to the action of steam or boil them. Large boilers were found in every dairy visited, so it is evident that the farmers do not realise the value of steaming or boiling, or they could easily carry out these methods. There is one model cowshed in the District at Kirkby Cliff, owned by Colonel Coke, of Brookhill Hall. The structure is built of blue bricks throughout even to the floors, paved and channelled inside, the animals having roomy stalls, with a wide passage in front from which they are fed. In addition to roof ventilators there are two large ventilators, one at each end of this passage giving an ample and ever changing supply of fresh air. The building is spouted with downfall pipes over grated gullies like an ordinary dwellinghouse. Anyone contemplating new cowsheds would do well to visit this one before proceeding with the work.

Elementary
Schools.

The overcrowding reported last year has been relieved with the exception of Kirkby Infant School, which remain in statu quo. I drew the attention of the School Managers during last summer to the amount of very fine dust always observed on the walls, floors, ceiling and furniture of these schools. I ascribe the cause of this in the first instance to the increase of motor traffic, and the corresponding increase of large clouds of dust in motion. Few people have any idea how the fine dust so raised

penetrates everywhere. In the second place it is due to the fact that the caretakers do not water the floors before sweeping them. I suggest as a remedy the use of Izal sawdust.

On the 18th May the new Gas Works were completed, and by the end of the year gas mains were extended to a large number of streets and houses in all three Wards. In the South Ward, hitherto unlighted, the main thoroughfares are now provided with lamps. With regard to street improvements and pavement of yards things are very much in statu quo, the only street completed under the Private Street Works Act, 1892, has been Bentinck Street, South Ward; the other streets in this Ward urgently needing improvement are Sansom Street, Fox Street, Reform Street, and James Street. In the West Ward, Bentinck Town, Princes Street, Mayfield Road, Hartley Road, and Southwell Lane require attention, the last two being impassable swamps. Paving of yards is still very much needed, especially at the rear of old property; the only improvement effected has been in New Street, where about a score of houses noted for the filthy condition of their back premises have been properly asphalted; the out buildings pulled down and replaced by new pail-closets. I am well assured that no sanitary improvement is of more immediate value than the covering of damp dirty backyards with impervious material such as asphalt. There is nothing uglier and more unhealthy than the condition of the plot of land at the back of houses, which instead of being properly cultivated, is left to be trodden down by fowls and other domestic animals, soaked with kitchen slops, and covered with decaying vegetable refuse.

Lighting and
paving of
streets and
yards.

Lack of bedroom accommodation in some houses.

In last year's Report, page 31, attention is drawn to the lack of bedroom accommodation at Portland Row ; nothing has been done by way of remedy, but the owners have undertaken not to let the houses to people with large families. But however small the families may be, the want of bedroom accommodation is seriously felt as soon as infectious disease breaks out, for the isolation of infectious cases is impossible in a house with only two small bedrooms. The same remarks apply to the majority of houses in Todd's Row, Sherwood Place, Nuncargate, and to many houses in Old Kirkby. However desirous the Council may be to preserve this class of cottage property in order to provide homes for the poorer class of workmen at low rents, it cannot be too strongly insisted on that two small bedrooms are insufficient even for a small family. Indeed in illness of every description this is a serious hindrance to suitable nursing and chances of recovery, for it often means that the person who is ill has to share his bed at night with another member of the family, though he may be suffering from pneumonia or some infectious fever. Another grave defect in these houses is that the kitchen is the only living-room, and it is very rare to find either a scullery or a pantry. The inmates lack the healthy incentive to have a parlour comfortably furnished, where the family may gather when the week's toil is over ; by such a change the exhaustion due to strenuous effort is relieved, domestic life made healthier and happier, opportunities of self-culture and the enjoyment of many innocent and wholesome games placed within reach, whereas cramped and confined in a room of 700 or 800 cubic feet it is not in human nature to be either healthy or happy.

Market.

The Market Place still continues to be let to travelling showmen, notwithstanding all that has been said about

the filthy habits of these people, and the fact that they nearly always carry infection in their train. The Market Stand should be asphalted, drained, and channelled, so as to be easily flushed on the mornings of Fridays and Saturdays; if this is not done the ground will soon become saturated with liquid filth from decayed fruit and decomposing fish. The necessity for this improvement will be apparent when I mention that recently on a Saturday morning I counted in one heap 43 fish heads, large and small, with gills and guts attached.

The necessity for a recreation ground has often been brought under your notice. It may be objected that the necessity is open to doubt, seeing that we are surrounded by open fields and country lanes, but the reply is that the open fields are not ours, and we are not allowed to trespass on them, while the country lanes and main highways are no longer bordered with verdant grass and lined with well trimmed hedges, where children may hunt for wild flowers and blackberries, but owing to the increase of motor traffic they have not only been practically converted into ugly dust covered tracks, and robbed of all their beauty, but are full of danger to the thoughtless youngsters, so that our muddy streets are the only playground left for them, and not a very safe or healthy one at that. Let us hope that the motor evil has one redeeming feature, namely to open the eyes of the community to the necessity of keeping green field and country lane as places of recreation and even safety.

Recreation
ground.

By Section 132 of this Act, I am required to report to you specifically on the administration of the Factory and Workshops Act, in connection with Factories, Workshops, Laundries, Workplaces, and Homework.

Factory and
Workshops
Act, 1901,
Section 132.

From the enclosed Table you will see that there are in

the Urban District 3 Factories, 7 Workshops (all bake-houses), 7 Workplaces (mostly dressmaking), and 58 Outworkers (Homeworks).

Thirty-four inspections of Factories, Workshops, and Workplaces were made during the year. The defects found were (a) at one Factory no proper separate accommodation for the sexes. On representation made to the owners an undertaking has been given to remedy this without delay. (b) At another Factory a large manure heap lies uncovered in the open, quite near to the premises. The works are surrounded by cottages and the inhabitants frequently complain that the effluvia from the manure heap is very offensive and annoying. Messrs. Hardy and Martin have been notified to abate this nuisance but up to now nothing has been done. I recommend that steps be taken to enforce the clearing away of this manure heap once in every week or at least once every other week.

(c) The owner of a new Bakehouse in Victoria Road, Kirkby, has been informed that he has committed a breach of the Act's Sanitary requirements of Bakehouses (sections 97-100). He has promised within reasonable time to remedy the defect.

One hundred and sixteen visits were made to outworkers premises. In two instances the work was carried on in grossly overcrowded houses. The overcrowding was remedied forthwith, and work resumed in a few days. In ten instances outwork was done on infected premises, i.e., in homes from which Scarlet Fever was notified. The work was stopped and goods disinfected.

The outworkers are mostly engaged in what is commonly called "seaming." They are not regularly employed, neither do many of them depend for their living on this class of work. Often they are the wives

and daughters of men who earn good wages and the women folk appear to do this work for pocket money. In not a few cases, however, the outworkers are widows and old people who are already receiving parish relief and who by these means endeavour to augment their scanty allowance.

It would be an advantage in connection with the administration of this Act to adopt Section 22 of the Public Health Acts Amendment Act 1890 and fix a standard of sufficiency and suitability of sanitary accommodation for persons employed in Factories and Workshops. At the present we have no standard of sanitary accommodation nor any bye-law bearing on the matter.

Adoption of
Section 22 of
Public Health
Acts Amends
1890.

Gentlemen, may I again thank you in the name of the Sanitary Officers for the uniform courtesy and kindness you have at all times shown us.

I have the honour to remain,

Your obedient servant,

JOHN MACKENZIE, M.O.H.

Appendix.

Summary of work done in the Inspector of Nuisances Department during the year 1906 :—

	Inspections made	Informal notices served by Inspector	Legal Notices by authority of the Council	Nuisances abated after Notice	In statu quo
Dwellinghouses :—					
Insanitary ...	33	...	33	...	33
Overcrowding ...	3	3	...	3	...
Ashpits and Privies ...	70	70	...	70	...
Defective Pail Closets	71	71	...	71	...
Defective W.C.'s ...	...	...	...	...	...
House Drainage ...					
Defective Traps and no connections ...	65	65	...	65	...
Water Supply ...	2	...	2	...	2
Offensive Trades and other nuisances ...	4	...	...	3	1

The following cases were submitted to the Council monthly as follows :—

Jan.	Feb.	March	April	May	June
46	16	12	19	17	16
July	Aug.	Sep.	Oct.	Nov.	Dec.
14	18	7	14	20	19
Houses disinfected after Infectious Diseases	...				146
Schools	...	...	...	...	Nil

TABLE I.
For whole District. Corrected according to Census 1901.

Year	Population esti- mated to middle of each year	Births		Deaths under 1 year of age				Deaths in Public Institutions	Deaths of non- residents regis- tered in district	Deaths of resi- dents registered beyond district	Deaths at all ages. Net.	
		Number	Rate	Number	Rate per 1000 bths registered	Number	Rate				Number	Rate
1896	8520	337	39.5	96	284.4	158	18.5	2	...	3	159	18.5
1897	8898	398	44.7	56	140.7	129	14.4	1	...	1	129	14.4
1898	9277	354	38.1	54	152.5	140	15.0	2	...	1	139	15.8
1899	9655	412	42.6	58	140.7	159	16.4	2	...	1	158	16.7
1900	10034	401	39.9	82	204.4	190	18.9	2	...	2	190	18.9
1901	10412	429	41.2	72	167.8	166	15.9	...	...	...	166	15.9
1902	11495	466	40.5	81	173.8	176	15.3	...	...	4	180	15.6
1903	12660	495	39.0	55	111.1	154	12.1	...	...	1	155	12.1
1904	13755	521	37.8	86	165.0	175	12.6	...	...	2	177	12.8
1905	14465	495	34.2	63	127.2	154	10.6	...	...	8	162	11.1
Averages for years 1896—1905	10917.1	430.8	39.7	70.3	166.7	160.1	14.9	1.1	...	2.3	161.5	15.1
1906	15673	513	32.7	71	138.4	178	11.3	...	...	10	188	11.9

Area in acres ... 5882

Population 10318 }
Inhabited houses 2055 }
At Census 1901

TABLE II.
Corrected according to Census 1901.

Year	Kirkby-in-Ashfield Urban District				East Ward.				West Ward				South Ward			
	Population estimated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Population to middle of year	Births registered	Deaths at all ages	Deaths under 1 year	Population to middle of year	Births registered	Deaths at all ages	Deaths under 1 year	Population to middle of year	Births registered	Deaths at all ages	Deaths under 1 year
1896	8520	337	158	96		120	41	35		60	26	12		61	26	16
1897	8898	398	129	56		178	58	21		79	24	7		141	47	28
1898	9277	354	140	54		157	56	29		91	35	8		106	49	17
1899	9655	412	159	58		180	58	23		108	56	21		124	45	14
1900	10034	401	190	82		181	88	44		107	66	23		113	36	15
1901	10412	429	166	72	3912	169	61	25	3193	125	55	25	3307	135	50	22
1902	11495	466	176	81	4530	204	65	28	3430	129	61	28	3535	133	50	25
1903	12260	495	154	55	5325	212	57	24	3705	146	52	12	3630	137	45	19
1904	13755	521	175	86	5965	238	70	39	4020	122	47	22	3770	161	60	25
1905	14465	495	154	63	6335	211	64	24	4260	161	50	21	3870	123	48	18
Averages of years																
1896 to 1905 ...	10917.1	430.8	160.1	70.3	5213.4	185	61.8	29.2	3721.6	112.8	47.2	17.9	3622.4	123.4	45.6	19.9
1906	15673	513	188	71	6828	237	65	26	4685	158	68	28	4160	118	55	17

TABLE III.

Cases of Infectious Disease notified during the year 1906.

Notifiable Diseases	Cases notified in whole District*									Total cases notified in each locality			
	At all ages	Under 1	1 to 15					15 to 25	25 to 65	65 and upwrds	East Ward	West Ward	South Ward
			1 to 5	5 to 15	15 to 25	25 to 65	65 and upwrds						
Diphtheria ...	13		3	8	1	1				7	5	1	
Erysipelas ...	23		3			19	1			7	8	8	
Scarlet Fever ...	120		41	66	6	7				38	64	18	
Enteric Fever...	27		4	12	5	6				7	13	7	
Puerperal Fever	2					2				1		1	
Totals ...	185		51	86	12	35	1			60	90	35	

TABLE IV.
Causes of, and ages at death during year 1906.

Causes of Death	Deaths in or belonging to whole District at subjoined ages							Deaths in or belonging to localities at all ages		
	All ages	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	East Ward	West Ward	South Ward
Whooping Cough ...	6	3	3	...	...	...	...	3	2	1
Diphtheria and Membranous Croup ...	1	...	...	...	...	1	...	...	1	...
Enteric Fever ...	1	...	1	...	...	...	...	1	...	...
Epidemic Influenza ...	2	...	...	...	...	1	1	1	...	...
Diarrhoea ...	10	10	...	...	...	...	...	4	6	...
Enteritis... ..	1	1	...	...	...	...	...	1	...	...
Plithisis ...	9	...	1	...	1	5	2	2	3	4
Other tubercular diseases	12	6	5	...	...	1	...	4	3	5
Cancer ...	10	...	...	...	...	9	1	4	5	1
Bronchitis ...	9	1	2	...	...	4	2	2	3	4
Pneumonia ...	23	7	5	2	...	3	6	11	9	3
Premature Birth ...	11	11	...	...	...	...	...	2	5	4
Heart Diseases ...	17	...	...	...	2	9	6	4	3	10
Accidents ...	5	...	1	1	...	2	1	1	2	2
Debility from Birth ...	15	15	...	...	...	...	...	5	5	5
Meningitis ...	1	1	...	...	...	...	...	...	1	...
All other causes ...	55	16	4	1	1	16	17	20	19	16
All causes ...	188	71	22	4	4	51	36	65	68	55

Infant Mortality during the Year 1906.

Cause of Death.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-2 months	2-3 months	3-4 months	4-5 months	5-6 months	6-7 months	7-8 months	8-9 months	9-10 months	10-11 months	11-12 months	Total Deaths under 1 year
All causes certified	16	2	4	3	25	5	8	3	7	4	3	2	3	1	4	4	69
All causes uncertified	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
Whooping Cough	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	3
Diarrhoea	...	...	1	...	1	1	1	2	2	2	...	...	...	...	...	1	10
Gastritis	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Premature Birth	9	2	...	...	1	...	...	...	...	1	...	...	...	...	...	...	11
Congenital Defects	2	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	4
Starvation	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1
Marasmus	4	...	2	1	7	2	2	1	2	...	...	...	...	...	1	...	15
Tuberculous Meningitis	...	...	...	...	...	...	1	...	...	1	...	...	...	1	1	...	4
Tuberculous Peritonitis	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Convulsions	2	...	...	...	2	2	1	...	2	...	...	...	...	...	...	...	7
Bronchitis	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Pneumonia	1	...	...	...	1	...	2	...	1	...	1	...	1	...	1	...	7
Other Causes	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	2	4
Totals	18	2	4	3	27	5	8	3	7	4	3	2	3	1	4	4	71

Population estimated to middle of 1906 ... 15673

Births in the year	{	legitimate ...	64
		illegitimate ...	7

Deaths in the year { legitimate infants ... illegitimate infants ...

Vital Statistics from 1896 (a) for whole District (b) for each Ward.

For whole District.										For Wards.				
Years	Houses	Populat'n	Birth-rate	Death-rate at all ages	Infant Death-rate		Houses	Populat'n	Birth-rate	Death-rate at all ages	Infant Death-rate			
1896	1704	8520	39.5	18.5	186.9	East Ward	684	3420	45.2	19.3	184.6			
						West "	420	2100	35.1	18.2	170.5			
						South "	600	3000	43.1	18.1	176.9			
1897	1809	8898	44.7	14.4	140.7	East Ward	709	3545	50.2	16.3	118.0			
						West "	460	2300	34.3	10.4	88.6			
						South "	640	3200	44.0	14.5	198.5			
1898	1915	9277	38.1	15.0	152.5	East Ward	708	3540	44.3	15.8	184.7			
						West "	524	2620	34.7	13.3	87.9			
						South "	683	3415	31.0	14.3	160.3			
1899	2033	9655	42.6	16.4	140.7	East Ward	718	3590	50.1	16.1	127.7			
						West "	612	3060	35.2	18.3	194.4			
						South "	703	3515	35.2	12.6	112.9			
1900	2108	10034	39.9	18.9	204.4	East Ward	741	3705	48.8	23.7	243.0			
						West "	645	3225	33.1	20.4	214.9			
						South "	722	3610	31.3	9.9	132.7			
1901	2177	10412	41.2	15.9	167.8	East Ward	756	3872	43.6	15.3	147.9			
						West "	625	3173	39.3	17.3	200.0			
						South "	674	3273	41.2	15.2	162.9			
1902	2299	11495	40.5	15.3	173.8	East Ward	906	4548	45.5	14.3	137.2			
						West "	686	3444	37.4	17.7	237.0			
						South "	707	3549	34.8	14.1	187.9			
1903	2532	12660	39.1	12.1	111.1	East Ward	1065	5325	39.8	10.0	113.2			
						West "	741	3705	39.4	14.0	83.1			
						South "	726	3630	37.8	12.3	138.6			
1904	2751	13755	37.8	12.6	165.0	East Ward	1193	5965	39.9	11.5	163.8			
						West "	804	4020	30.3	11.6	180.3			
						South "	754	3770	42.7	15.6	155.2			
1905	2893	14465	34.2	11.1	127.2	East Ward	1267	6335	33.3	9.7	113.7			
						West "	852	4260	37.7	10.5	130.4			
						South "	774	3870	31.8	12.1	146.3			
1906	3014	15673	32.7	11.3	138.4	East Ward	1313	6828	34.7	9.2	109.7			
						West "	901	4685	33.7	13.4	177.2			
						South "	800	4160	28.3	12.5	144.0			

Vital Statistics of England and Wales, 1906, for comparison :—

	Birth-rate		Death-rate		Zymotic Death-rate		Infant Mortality	
England and Wales	...	27.0	...	15.4	...	1.73	...	133.0
76 Great Towns	...	27.9	...	16.0	...	2.24	...	140.0
142 Smaller Towns	...	26.5	...	14.4	...	1.70	...	138.0
England and Wales less the 218 Towns	...	26.3	...	15.0	...	1.18	...	115.0

Summary of Visits to and Reports of Workshops, Factories, and Workplaces.

Name and Situation of Workshop.	Name and Address of Owner.	No. of Workers	No. of Home-workers	No. of Rooms	Cubic space	Sanitary conveniences	Date of inspection	Summary of Reports.
FACTORIES—								
Hosiery Factory, Nuncargate Station Street, East Kirkby	Geo. Cook, Esq , Nuncargate, Kirkby, Notts.	19	15	2	11036	1 0	Mar. 6th Nov. 13th	Only males employed
Kirkby Manufacturing Co., Prospect Street, East Kirkby	Walker and Sons, East Kirkby, Notts.	71	20	2	63000	3 3	Mar. 6th Nov. 13th	Space and ventilation ample
Aerated Water Works, The Park, East Kirkby	Kirkby Manufacturing Co.	29	20	4	31360	2 0	Mar. 6th Nov. 13th	Midden privies converted into pail closets Should have separate closets for the sexes
WORKSHOPS—BAKEHOUSES								
Cemetery Road, East Kirkby	Hardy and Martin, The Park, Kirkby, Notts.	3	...	2	16800	1	Mar. 6th Nov. 13th	Manure heap should be covered in, too near and seldom removed
Morley Street, East Kirkby	E. T. Beaumont, Esq., Cemetery Rd, E. Kirkby, Notts.	3	...	2	1232	1	Mar. 6th Nov. 13th	Ventilation and space ample
The Hill, Kirkby	Ed. Wilbourn, Station Street, Kirkby, Notts.	2	...	1	2816	1 pail	Mar. 14th Nov. 23rd	" "
Victoria Road, Kirkby	J. Bond, The Hill, Kirkby	1	...	1	1032	"	Mar. 14th Nov. 23rd	" "
Prospect Street, East Kirkby	F. Wilson, Victoria Road, Kirkby	3	...	1	1440	"	Mar. 14th Nov. 23rd	Closet too near, yard dirty, no drainage
Low Moor Road, East Kirkby	R. Bains, Prospect Street, East Kirkby	1	...	1	1232	"	Mar. 14th Nov. 23rd	Ventilation and space ample
The Hill, Kirkby	J. Burton and Sons, Low Moor Rd., E. Kirkby	1	...	1	1452	"	Mar. 14th Nov. 23rd	" "
WORKPLACES—								
Tailoring, Station Street, East Kirkby	Co-operative Society. Kirkby, Notts.	3	...	3	1675			
Dressmaking, Gladstone Street, East Kirkby	Fred King, Station Street, East Kirkby	2	...	1	1040	"	Mar. 20th Nov. 30th	" "
Dressmaking, Diamond Avenue, East Kirkby	Mrs. Scothern, East Kirkby, Notts.	3	...	1	1680	1 privy	Mar. 20th Nov. 30th	" "
Dressmaking, Victoria Road, Kirkby	Miss Chadburn, East Kirkby, Notts.	2	...	1	1321	"	Mar. 20th Nov. 30th	" "
Dressmaking, Fisher Street, Nuncargate	Miss Sharley, Kirkby, Notts.	3	...	1	1496	"	Mar. 20th Nov. 30th	" "
Dressmaking, Cemetery Road, Edst Kirkby	J. Beet, Fisher Street, Kirkby, Notts.	3	...	1	768	"	Mar. 20th Nov. 30th	" "
Dressmaking, Low Moor Road, East Kirkby	Miss Saywell, East Kirkby, Notts.	3	...	1	1152	"	Mar. 20th Nov. 30th	" "
	Miss Hoyland, East Kirkby, Notts.	2	...	1	1014	"	Mar. 20th Nov. 30th	" "

